

Attorney Docket No.: 00CON122P-DIV1

**In the Claims:****Claims 1-23 (canceled).**

**Claim 24 (currently amended):** A structure in a semiconductor chip, said structure comprising:

    a first area of a dielectric, said first area of said dielectric having a first permeability;

    a second area of said dielectric, said second area of said dielectric having a second permeability, said second permeability being higher than said first permeability;

    a permeability conversion material interspersed within said second area of said dielectric, said permeability conversion material having a third permeability, said third permeability being greater than said first and said second permeabilities;

    a conductor patterned in said second area of said dielectric, said permeability conversion material not being situated underneath said conductor;

    wherein said dielectric is not situated underneath said conductor and not situated over said conductor, wherein said first area of said dielectric is not situated underneath said second area of said dielectric and not situated over said second area of said dielectric, wherein said dielectric is a low-k dielectric, wherein said permeability conversion material is selected from the group consisting of nickel, iron, nickel-iron alloy, and magnetic oxide, wherein said conductor is selected from the group consisting of copper,

Attorney Docket No.: 00CON122P-DIV1

aluminum, and copper-aluminum alloy, and wherein said permeability conversion material is interspersed in said second area of said dielectric by ion implantation, wherein said first area of said dielectric, said second area of said dielectric, and said conductor have a same thickness.

**Claim 25 (original):** The structure of claim 24 wherein said dielectric is silicon dioxide.

**Claims 26-29 (canceled).**

**Claim 30 (original):** The structure of claim 24 wherein said conductor is patterned as a square spiral.

**Claim 31 (currently amended):** A structure in a semiconductor chip, said structure comprising:

    a dielectric having a first permeability;  
    a permeability conversion material having a second permeability, said permeability conversion material being interspersed within said dielectric, wherein said second permeability is greater than said first permeability;  
    an inductor comprising a conductor patterned within said dielectric, said conductor having first and second terminals, said first and second terminals of said conductor being

Attorney Docket No.: 00CON122P-DIV1

respectively first and second terminals of said inductor, said permeability conversion material not being situated underneath said inductor, said dielectric not being situated underneath and not being situated over said inductor;

wherein said permeability conversion material comprises metal ions, wherein said conductor comprises a plurality of metal turns, wherein said plurality of metal turns are not situated underneath said dielectric and not situated above said dielectric, wherein said dielectric and said plurality of metal turns of said conductor have a same thickness.

**Claim 32 (original):** The structure of claim 31 wherein said dielectric is silicon dioxide.

**Claim 33 (original):** The structure of claim 31 wherein said dielectric is a low-k dielectric.

**Claim 34 (original):** The structure of claim 31 wherein said permeability conversion material is selected from the group consisting of nickel, iron, nickel-iron alloy, and magnetic oxide.

**Claim 35 (original):** The structure of claim 31 wherein said conductor is selected from the group consisting of copper, aluminum, and copper-aluminum alloy.

Attorney Docket No.: 00CON122P-DIV1

**Claim 36 (original):** The structure of claim 31 wherein said conductor is patterned as a square spiral.

**Claim 37 (currently amended):** A semiconductor chip comprising:

- a first dielectric area of a dielectric having a first permeability;
- a second dielectric area of said dielectric having a permeability conversion material interspersed therein such that a permeability of said second dielectric area is higher than said first permeability;
- an inductor patterned in said second dielectric area, said inductor having first and second connection terminals, said first and second connection terminals being capable of providing connection to a device fabricated in said first dielectric area of said semiconductor chip, said permeability conversion material not being situated underneath said inductor;

wherein said dielectric is not situated underneath said inductor and not situated over said inductor, wherein said first dielectric area of said dielectric is not situated underneath said second dielectric area of said dielectric and not situated over said second dielectric area of said dielectric, wherein said permeability conversion material is interspersed in said second dielectric area of said dielectric by ion sputtering, wherein said first dielectric area, said second dielectric area, and said inductor have a same thickness.

Attorney Docket No.: 00CON122P-DIV1

**Claim 38 (previously presented):** The semiconductor chip of claim 37 wherein said permeability conversion material is interspersed in said second dielectric area when said first dielectric area is covered with photoresist.

**Claim 39 (previously presented):** The semiconductor chip of claim 37 wherein said first dielectric area comprises silicon dioxide.

**Claim 40 (previously presented):** The semiconductor chip of claim 37 wherein said first dielectric area comprises a low-k dielectric.

**Claim 41 (previously presented):** The semiconductor chip of claim 37 wherein said second dielectric area comprises silicon dioxide.

**Claim 42 (previously presented):** The semiconductor chip of claim 37 wherein said second dielectric area comprises a low-k dielectric.

**Claim 43 (previously presented):** The semiconductor chip of claim 37 wherein said permeability conversion material is selected from the group consisting of nickel, iron, nickel-iron alloy, and magnetic oxide.

Attorney Docket No.: 00CON122P-DIV1

**Claim 44 (previously presented):** The semiconductor chip of claim 37 wherein said permeability conversion material is interspersed in said second dielectric area by ion implantation.

**Claim 45 (canceled).**

**Claim 46 (previously presented):** The semiconductor chip of claim 37 wherein said inductor comprises material selected from the group consisting of copper, aluminum, and copper-aluminum alloy.

**Claim 47 (previously presented):** The semiconductor chip of claim 37 wherein said inductor is patterned as a square spiral.

**Claim 48 (previously presented):** The semiconductor chip of claim 46 wherein said permeability conversion material is selected from the group consisting of nickel, iron, nickel-iron alloy, and magnetic oxide.